



United States Standards for Grades of Frozen Headless Dressed Whiting

Description of the product.

The product described in this part consists of clean, wholesome whiting (silver hake) *Merluccius bilinearis*, *Merluccius albidus*; completely and cleanly headed and adequately eviscerated. The fish are packaged and frozen in accordance with good commercial practice and are maintained at temperatures necessary for the preservation of the product.

Grades of frozen headless dressed whiting.

- (a) “U.S. Grade A” is the quality of frozen headless dressed whiting that (1) possess a good flavor and odor and that (2) for those factors that are rated in accordance with scoring system outlined in this part, have a total score of 85 to 100 points.
- (b) “U.S. Grade B” is the quality of frozen headless dressed whiting that (1) possess at least reasonably good flavor and odor and that (2) rate a total score of not less than 70 points for those factors of quality that are rated in accordance with the scoring system outlined in this part.
- (c) “Substandard” or “Utility” is the quality of frozen headless dressed whiting that meet the requirements of Description of the product but that otherwise fail to meet the requirements of U.S. Grade B.

Determination of the grade.

In a plant under USDC Contract Inspection the grade is determined by examining the product for factors 1 to 10 in the thawed state and factor 11 in the cooked state. For lot inspection, examination of the product for factors 1, 2 and 3 is carried out in the frozen state and 4 to 10 in the thawed state. Factor 11 is examined in the cooked state.

- (a) *Factors rated by score points.* Points are deducted for variations in the quality of each factor in accordance with the schedule in Table 1. The total of points deducted is subtracted from 100 to obtain the score. The maximum score is 100 the minimum score is 0.
- (b) *Factors not rated by score points.* The factor of “flavor and odor” is evaluated organoleptically by smelling and tasting after the product has been cooked in accordance with Definitions and methods of analysis.
- (1) Good flavor and odor (essential requirements for a U.S. Grade A product) means that the cooked product has the typical flavor and odor of the species and is free from rancidity, bitterness, staleness, and off-flavors and off-odors of any kind.
 - (2) Reasonably good flavor and odor (minimum requirements of a U.S. Grade B product) means that the cooked product is lacking in good flavor and odor but is free from objectionable off-flavors and off-odors of any kind.



Definitions and methods of analysis.

(a) *Selection of the sample unit.* The sample unit consists of the primary container and its entire contents. The whiting are examined according to Table 1. Definitions of factors for point deductions are as follows:

(b) *Examination of sample, frozen state.* When this product is examined under USDC Contract Inspection, the samples are examined for factors 1, 2, and 3 in Table 1 in the thawed state. When the product is lot inspected, the samples are examined for factors 1, 2, and 3 in Table 1 in the frozen state.

- (1) “*Arrangement of product*” refers to the packing of the product in a symmetrical manner, bellies or backs all facing in the same direction, fish neatly dovetailed.
- (2) “*Condition of the packaging material*” refers to the condition of the cardboard or other packaging material of the primary container. If the fish is allowed to stand after packing and prior to freezing moisture from the fish will soak into the packaging material and cause deterioration of that material.
- (3) “*Dehydration*” refers to the presence of dehydrated (water-removed) tissue on the exposed surfaces of the whiting. Slight dehydration is surface dehydration which is not color-masking. Deep dehydration is color-masking and cannot be removed by scraping with a fingernail.

(c) *Examination of sample, thawed state.* Thawed state means the state of the product after being thawed. Thawing the sample is best accomplished by enclosing the sample in a film bag and immersing in an agitated water bath held at 68 · F., ± 2 · F. Allow the product to remain immersed until thawed. Alternatively when the facilities are lacking for water thawing, the sample may be thawed by slacking it out at a temperature between 30 · F. to 40 · F. on an aluminum tray from 2 hours for a 1 ½-pound sample to 8 hours for a 10-pound sample.

- (1) “*Minimum size*” refers to the size of the individual fish in the sample. Fish 2 ounces or over are considered acceptable. Smaller fish cannot be cooked uniformly with acceptable size fish. Separate the fish of unacceptable size, divide their number by the weight of the sample in pounds, and apply to Table 1. Example--four fish of unacceptable size in a 5-pound package is $4/5 = 0.8$, a 10 point deduction.
- (2) “*Uniformity*” From the fish remaining, select by count 10 percent (minimum of one fish) of the largest and 10 percent (minimum of one fish) of the smallest and divide the largest weight by the smallest weight to get a weight ratio.
- (3) “*Heading*” refers to the condition of the fish after they have been headed. The fish should be cleanly headed behind the gills and pectoral fins. No gills, gill bones, or pectoral fins should remain after the fish have been headed.
- (4) “*Evisceration*” refers to the cleaning of the belly cavities of the fish. All spawn, viscera, and belly strings should be removed.
- (5) “*Scaling*” refers to the satisfactory removal of scales from the fish.
- (6) “*Color of the cut surfaces*” refers to the color of the cut surfaces of the fish after heading and other processing.
- (7) “*Bruises and broken or split skin*” refers to bruises over one-half square inch in area and splits or breaks in the skin more than one-half inch in length which are not part of the processing.



(d) *Examination of sample, cooked state.* Cooked state means the state of the sample after being cooked. Cooking the sample is best accomplished by inserting the sample into a film type bag and submerging it into boiling water for from 18-20 minutes. A minimum of three fish per sample unit shall be cooked.

- (1) “*Texture defects*” refers to the absence of normal textural properties of the cooked fish flesh, which are tenderness, firmness, and moistness without excess water. Texture defects are dryness, softness, toughness, and rubberyness.

(e) *General definitions*

- (1) *Small* (overall assessment) refers to a condition that is noticeable but is only slightly objectionable.
- (2) *Moderate* (overall assessment) refers to a condition that is distinctly noticeable but is not seriously objectionable.
- (3) *Large* (overall assessment) refers to a condition which is both distinctly noticeable and seriously objectionable.



Tolerances for certification of officially drawn samples.

The sample rate and grades of specific lots shall be certified in accordance with Part 260 Subpart A of this chapter, (Regulations Governing Processed Fishery Products).

TABLE 1 - SCHEDULE OF POINT DEDUCTIONS PER SAMPLE

[See footnotes at end of table.]

Factors Scored	Method of determining score	Deduct
FROZEN STATE (LOT INSPECTION ONLY)		
1. Arrangement of product ¹	Small degree: 10 percent of fish twisted or bellies and backs not facing the same direction.	2
	Large degree: More than 10 percent of fish twisted, void present or some fish cross packed.	5
2. Condition of packaging (overall assessment).	Poor: Packaging material has been soaked, softened or deteriorated.	2
3. Dehydration	Small degree: Slight dehydration of the exposed surfaces.	2
	Large degree: Deep dehydration of the exposed surfaces	5
THAWED STATE		
4. Minimum size: Fish 2 oz. or over are of acceptable size.	Number of fish less than 2 oz. per lb:	
	Over 0 - not over 0.5.....	5
	Over 0.5 - not over 1.0.....	10
	Over 1.0 - not over 2.0.....	20
	Over 2.0.....	30
5. Uniformity. Weight ratio of fish remaining. The 10 percent largest fish divided by the 10 percent smallest fish.	Weight ratio 10 percent smallest and 10 percent largest:	
	Over 2.0 - not over 2.4.....	2
	Over 2.4 - not over 2.8.....	5
	Over 2.8 - not over 3.2.....	10
	Over 3.2 - not over 3.6.....	20
	Over 3.6.....	30
6. Heading ¹	Small degree: 10 percent of fish carelessly cut.	5
	Moderate degree: Over 10 percent of fish carelessly cut.	15
7. Evisceration (overall assessment)	Small degree: Slight evidence of viscera	2
	Moderate degree: Moderate amounts of spawn, viscera, etc.	10
	Large degree: Large amounts of viscera, spawn, etc.	30
8. Scaling ¹	Small degree: 10 percent of fish not well scaled.	2
	Large degree: Over 10 percent of fish not well scaled.	5
9. Color of the exposed surfaces (overall assessment).	Small degree: Minor darkening, dulling.	2
	Large degree: Objectionably dark, brown, dull.	5
10. Bruises and split or broken skin	Presence of bruises and/or broken or split skin per pound:	
	Over 0 - not over 0.5	1
	Over 0.5 - not over 1.0	2
	Over 1.0 - not over 1.5	4
	Over 1.5 - not over 2.0	7
	Over 2.0	10
11. Texture (overall assessment)	Small degree: Moderately dry tough, mushy, rubbery, watery, stringy.	5
	Large degree: Excessively dry, tough, mushy, rubbery, watery, stringy.	15

¹10 percent of fish refers to 10 percent by count rounded to nearest whole fish.
[42 FR 52750, Sept. 30, 1977, as amended at 51 FR 34990, Oct. 1, 1986]